

1 **ABSTRACT**

2 A multi-tasking operating system and method updates PCI address values
3 in an extension register to ensure that various threads utilize the correct values
4 when accessing peripheral PCI devices. When application program threads
5 require access to a PCI device, the operating system writes the high order bits of
6 the PCI device address to two places: (1) the extension register of the PCI host
7 bridge to allow immediate addressing of the PCI device, and (2) separate memory
8 locations associated with the threads. When a context switch occurs from a first
9 thread to a second thread, the operating system retrieves the stored value from the
10 memory location associated with the second thread and writes the value to the
11 extension register. In this manner, when the second thread requires access to its
12 PCI device, the proper address value is already located in the extension register.

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